Through trip examples include trips originating south of NE 37th Street who cut through using the 37th-39th-42nd route to reach SR 202 to avoid am congestion at SR 202/Sahalee Way or the congestion on East Lake Sammamish Parkway approaching SR 202.

TRAFFIC ROUTING ASSIGNMENT ANALYSIS for Old Mill Point in conjunction with Weber's Ridge & Chrysalis Estates prepared by William Popp Associates December 4, 1998, is a study of the 37th-39th-42nd route traffic. TModel and EMME/2 traffic modeling was performed to project buildout volumes for the year 2003, evaluate peak hour travel time runs, and LOS at intersections. Transyt-7F was used for capacity analysis. AWDT traffic volumes for the 37th-39th-42nd route between NE 37th Way and 192nd Drive NE were projected for with and without the NE 42nd Street barricade and with and without SR 202 improvements. This work was performed for Examiner's Condition 19.c of the Old Mill Point, Weber's Ridge, Chrysalis Estates plat approval. In addressing traffic control plan mitigation, the Examiner's approval conditions include (19.c):

> Understanding between the applicant, Save Timberline, and the Hidden Ridge Home owner attached to Exhibit 84 and shall include, but not be limited to, traffic control devices such as reduced pavement widths, traffic circles, pavement markings, and stop signs. The final determination of the design requirements will be made by King County.
>
> The plans shall also provide for and fund the measurement of peak hour traffic and ADT for five years after plat completion along the neighborhood collector route through Hidden Ridge and Timberline and **for implementation of further traffic control modifications if 2,000 ADT is exceeded at any point west of the intersection of NE 37th Way and 205th Place NE**. Such mitigations may include bonding to finance construction of turning and storage lanes or other interim improvements at the SR 202 and Sahalee Way intersection designed to decrease traffic delays.

The 1998 William Popp TRAFFIC ROUTING ASSIGNMENT ANALYSIS Report projected traffic volumes using ITE trip generation rates and local rates determined from A STUDY OF the Timberline neighborhood.

The ITE (Institute of Transportation Engineers) Trip Generation Manuals provide trip generation rates for land uses. Rates are provided for land area, classes of uses (residential, commercial, industrial), and by time periods. Time periods are peak hours, peak periods, and 24 hour. **ITE 24 hour trip generation rates are weekday totals.**

Average Daily Totals (ADT) are the average of Sunday through Saturday. Average Weekday Total (AWDT) is the average of Monday through Friday. Examples of the variations are illustrated in the following tabulation:

TABLE 1

Daily Traffic Factors

Source or Count Location	Sun	Mon	Tue	Wed	Thur	Fri	Sat	AWDT	ADT	ADT/ AWDT (In %)
ITE Transportation Engineering Handbook, HB Fig 4.7 (% of ADT)	70	102	97	98	100	123	110	104	100	96
ITE, An Introduction to Highway Transportation Engineering, Fig. 2-9 (% of ADT)	74	106	102	102	103	112	101	105	100	95
161 Ave SE S/O SE 24 St Bellevue	3,027	3,546	3,712	3,678	3,645	3,845	3,308	3,685	3,537	
% of ADT	86	100	105	104	103	109	94	104	100	96
212 Ave SE N/O SE 13 St Sammamish	2,734	4,596	4,452	4,620	4,269	4,412	3,337	4,470	4,060	
% of ADT	67	113	110	114	105	109	82	110	100	91
Average in percent	**74**	**105**	**103**	**104**	**103**	**113**	**97**	**106**	**100**	**95**

One of the Hearing Examiner's requirements is "for implementation of further traffic control modifications if 2,000 ADT is exceeded at any point west of the intersection of NE 37th Way and 205th Place NE." The William Popp work utilizes AWDT consistent with the ITE Trip Generation Manual and urban traffic design. Assessment of the Hearing Examiner ADT condition could be made by reducing the AWDT volumes to ADTs. The average AWDT to ADT conversion factor of Table 1 is 95%. Traffic Engineering general design practice is to use the 20th or 30th highest weekday peak hour for capacity design and to use AWDT for general design, traffic control, and traffic regulation such as parking, establishing speed limits using weekday 85th percentile volumes.

The 37th-39th-42nd route volumes between NE 37th Way and the SR 202/192nd Drive NE intersection are reported using the local trip generation volumes with and without SR 202 improvements. The Popp report noted that in general, the ITE trip generation rates result in higher volumes than the local rates. The 37th-39th-42nd route volumes are projected to exceed 2,000 using the lower trip rates of the Timberline study. The ITE trip generation rates are higher and would trigger the 2,000 per day condition sooner than the Timberline study rates.

The 1998 William Popp report provided 2003 volume forecasts which are shown below:

TABLE 2

William Popp AWDT Traffic Volume Projections

Location	2003 Weekday Total With Barricade	Without Barricade	Without Barricade & SR 202 Widened
1. 208 Avenue NE n/o NE 37 Way	1,580	1,230	1,280
2. 206 Avenue NE n/o NE 37 Way	800	690	560
3. NE 37 Way n/o 205 Place NE	1,170	1,140	550
4. NE 39 Street w/o 204 Avenue NE	890	1,880	1,090
5. 203 Avenue NE n/o NE 39 Street	700	2,020	1,230
6. NE 42 Street w/o Chrysalis Estates	0	2,190	1,420
7. 192 Drive NE n/o Old Mill Point	900	2,430	1,700

The 1998 William Popp Associates analysis identifies three locations (5 6, & 7) that would have a weekday total exceeding 2,000 if the barricade on NE 42nd Street is removed before SR 202 improvements are made. Examiner condition 19.c. stipulates implementation of further traffic control modifications if 2,000 ADT is exceeded at any point west of the intersection of NE 37th Way and 205th Place Northeast.

Adjusting the William Popp AWDT volumes to ADT volumes using the 0.95 ADT/AWDT factor would reduce the 2,020 to 1,919 and 2,190 to 2,080.

Locations 4 and 5, NE 39th Street and 203rd Avenue NE, provides an indication of cut through traffic that would occur if the NE 42nd Street barricade is removed prior to the SR 202 widening improvements. Removing the barricade is projected to result in an increase of more than 1,000 vehicles per day. The increase would be 200 (39th) and 530 (203rd) if the barricade is removed and the SR 202 improvements are made.

Comparing, if the barricade is removed and SR 202 improvements are not made, 39th increases by 890 (176%)and 203rd increased by 1,320 (289%).

The traffic volume differences between opening the barricade with and without the SR 202 improvements indicate 700 - 900 per day would use the 37th-39th-42nd route as a cut-through.

The William Popp traffic model generated and distributed volumes for the area extending south to NE 16th Street and Shannonwood. A model extending further south and beyond Inglewood Hill Road could indicate higher volumes due to a larger traffic generation area and the deteriorated East Lake Sammamish Parkway and SR 202 LOS conditions.

Removing the NE 42nd Street barricade prior to the SR 202 improvements will result in substantially higher volumes on the 37th-39th-42nd route. The LOS for both AM and PM

peaks at the SR 202 intersections with East Lake Sammamish Parkway and Sahalee Way are at LOS F. The 37th-39th-42nd route could provide shorter travel times between SR 202 west of East Lake Sammamish Parkway and the north end of Sammamish during both the am and pm peaks. Traffic delays at SR 202 intersections will continue to increase resulting in higher demand to use the 37th-39th-42nd route. If the barricade is removed before the SR 202 widening improvements are made, the volumes could exceed those of the Popp report. Volume projections of the William Popp Report could be exceeded even with the traffic calming measures that have been installed and being supplemented with additional controls.

NE 51st STREET BARRICADE

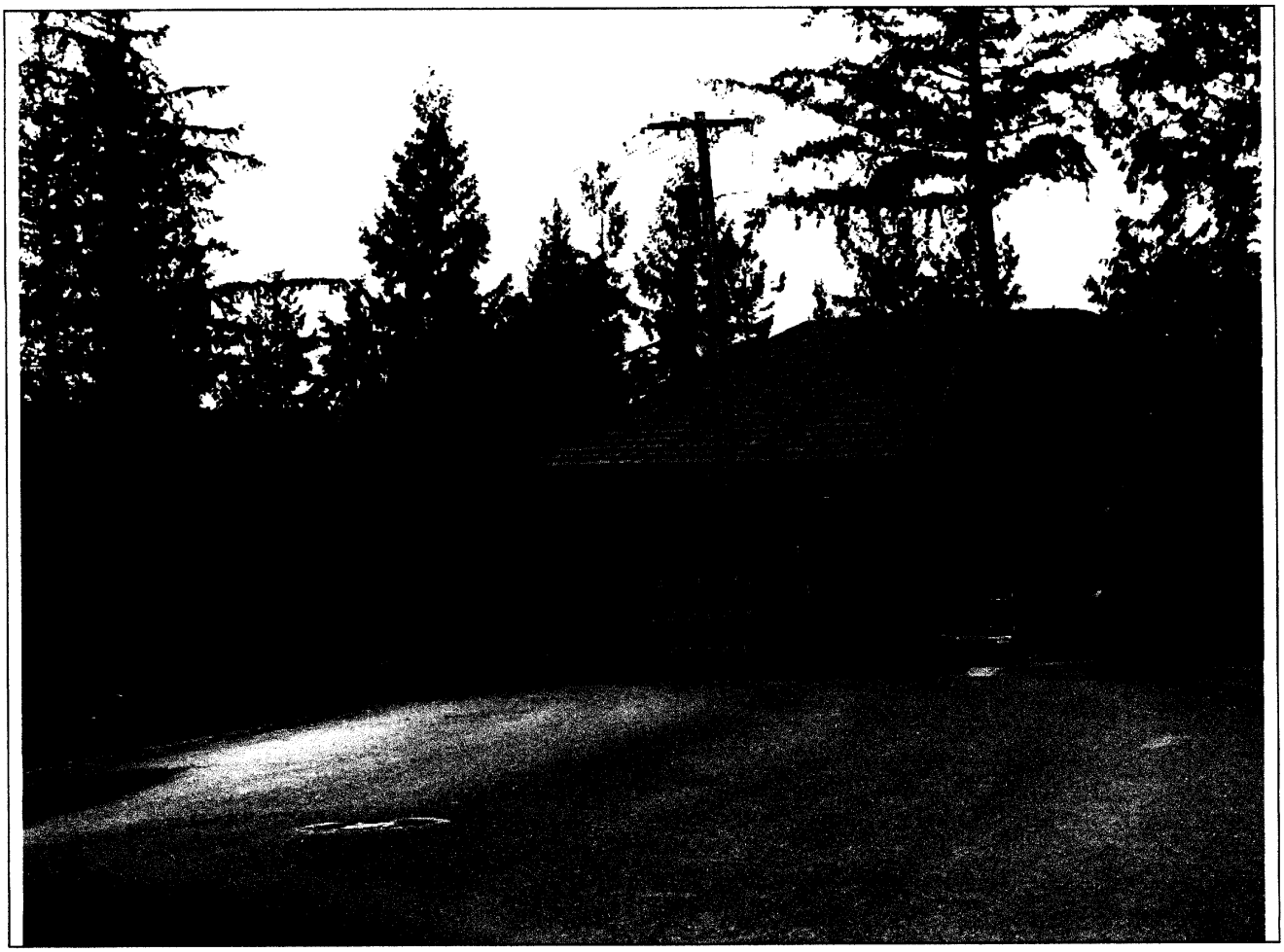


Figure 9 – NE 51st Street Barricade - October 2001

The barricade is a condition of the October 1989 Hidden Ridge Plat approval. Residents of Sammamish View Park and neighbors opposed a connection. The Plat was approved with the condition of constructing NE 51st Street connecting 189th Avenue NE and 193rd (192nd Drive NE) with a barricade prohibiting vehicular passage except for emergency vehicles. The barricade is to remain in place until such time as the intersection of 193rd Avenue NE (192nd Drive) with SR 202 functions at Level of Service "C" or better for all vehicular movements entering and exiting 193rd Avenue NE (192nd Drive NE).

Leaving the barricade in place until the SR 202 improvements are made will deter motorists seeking alternates to avoid SR 202 congestion. Removing it before the improvements will result in some motorists seeking to avoid the congestion utilizing the opened links.

ADDITIONAL "BARRICADES"

The Hidden Ridge examiner dispensed with the Propst Estates plat connection of NE 49th Place (a 1983 King County Council plat condition to reserve right-of-way for future access to the Hidden Ridge area). It was determined that the public interest is not served by this connection as both are adequately served by better primary and secondary accesses than could be provided across the steep terrain between the present terminus of NE 49th Place and the Hidden Ridge Property.

FALL 2001 COUNTS

Fall 2001 traffic counts provide a benchmark to evaluate traffic volume projections of the development studies. In particular, the approval of Old Mill Point, Weber's Ridge, and Chrysallis Estates identified 2,000 vehicles per day as a threshold that would require additional traffic measures for the corridor connecting NE 37th Way to the north (192nd Drive NE).

Level-of-service (LOS) is at "F" at the Sahalee Way & SR 202 intersection and the East Lake Sammamish Parkway & SR 202 intersection. The Popp analysis shows that over 400 PM peak trips would divert from SR 202 and Sehalee Way to the 37th-39th-42nd route. The eastbound SR 202 approach volume to Sehalee Way would drop from 1,999 to 1,597 while the southbound volume on NE 39th Street would increase from 25 to 408. The diversion would increase cut through traffic but the LOS at Sahalee Way and SR 202 would remain at LOS F.

October 30, 2001, traffic counts are tabulated in the Appendix A with a vicinity map that identifies their locations.

ALTERNATIVE ACTIONS SUMMARY

NE 42ND STREET BARRICADE

RETAINING the NE 42nd Street barricade UNTIL SR 202 is improved maintains the existing conditions:

- 37th-39th-42nd route traffic volumes do not exceed 2,000 per day,
- LOS remains the same at the SR 202 intersections (F),
- Internal neighborhood circulation traffic vehicle-miles-of-traffic (VMT) increases,
- Emergency vehicles are delayed to pass the barricade,
- School buses must dead head back to where they entered the neighborhoods,
- Delivery vehicles, dial-a-ride services, and postal service may have to dead head,
- increased VMT increases pedestrian exposure,
- increased VMT increases fuel consumption and emissions.

REMOVING the NE 42nd Street barricade BEFORE SR 202 is improved:

- 37th-39th-42nd route traffic volumes will exceed 2,000 per day,
- Does not change LOS at the SR 202 intersections (F),
- Internal neighborhood traffic has "direct" access to adjoining neighbors,
- Emergency vehicles are not delayed,
- School bus and service vehicle routing alternatives are improved,
- Cut through traffic will increase volumes; the PM peak on NE 39th Street will increase from less than 30 to more than 400,
- Cut through traffic can have a propensity to speed and some cut through will be unfamiliar with the twisting circuitous route resulting in safety concerns for pedestrian traffic, driveway access safety, and neighborhood intersections,
- Cut through traffic could be higher on rainy dark days of winter when peripheral arterials experience the highest congestion resulting in further neighborhood safety exposure.

REMOVING the NE 42nd Street barricade AFTER SR 202 is improved:

- 37th-39th-42nd route traffic volumes do not exceed 2,000 per day,
- LOS at the SR 202 intersections is not a factor with the improvements,
- Internal neighborhood traffic has "direct" access reducing the extra travel,
- Emergency vehicles are not delayed to pass the barricade.

NE 51st STREET BARRICADE

REMOVING the NE 51st Street barricade BEFORE SR 202 is improved:

- Cut through traffic can be expected,
- Does not change LOS at the SR 202 intersections (F),
- Internal neighborhood traffic has "direct" access to adjoining neighbors,
- Emergency vehicles are not delayed to pass the barricade,
- Cut through traffic can have a propensity to speed resulting in safety concerns for pedestrian traffic, driveway access safety, and neighborhood intersections,
- Cut through traffic could be higher on rainy dark days of winter when peripheral arterials experience the highest congestion resulting in further neighborhood safety exposure.

RETAINING the NE 51st Street barricade UNTIL SR 202 is improved maintains the existing conditions.

- Cut through traffic to avoid AM peak hour East Lake Sammamish congestion cannot occur.
- Internal neighborhood traffic VMT increases for trips around the barricade,
- Emergency vehicles are delayed to pass the barricade,
- Longer trips to go around the barricades increases the distances of pedestrian exposure,
- Fuel consumption and emissions are increased from the additional VMT.

REMOVING the NE 51st Street barricade AFTER SR 202 is improved:

- LOS at the SR 202 intersections is not a factor with the improvements,
- there is no visible reason for traffic to cut through other than congestion,
- Internal neighborhood traffic has "direct" neighborhood access reducing extra travel caused by the barricade,
- Emergency vehicles are not delayed to pass the barricade.

SUMMARY

SR 202 improvements will provide capacity relieving the congestion that increases the demand for cut through traffic. Neighborhood traffic calming concerns are typically requesting action for too much traffic going too fast. Traffic cutting through on the opened route would have similar operational characteristics. Neighborhood traffic safety impacts would include driveways, vertical and horizontal curves, intersections without the right-of-way being assigned by signing, pedestrian traffic, and traffic characteristics being in impacted by cut through traffic.

Removing the barricades would increase neighborhood traffic volumes while there would not be a measurable change in Level-of-Service (LOS) at the congested SR 202 intersections.

The history of plat approvals extending back to 1986 identifies the complexities of the circuitous routes intertwined with approval conditions. It appears that the approval conditions for both the NE 51st Street and the NE 42nd Street plats are for the barricades to be removed to provide neighborhood circulation, emergency vehicle access, school bus access but NOT for the routes to be used for more than a neighborhood access. It is clear that the approvals were made with the understanding that the potential for cut through traffic will remain high until the SR 202 improvements are made and congestion at the Sahalee Way and the East Lake Sammamish Park Way intersections is reduced as noted in the Hearing Examiner conditions.

The cost of time for residents and the city to review the barricades prior to the SR 202 improvements will be substantial and likely to result in the barricades remaining until the SR 202 improvements are made. This is due to barricade removal resulting in safety impacts to the neighborhoods with no measurable gain in LOS at the congested intersections serving the area. Hearing Examiner conditions of plat approvals since 1986 are to provide internal connections but not provide for cut through traffic. Therefore, it is recommended to postpone removing the barricades until SR 202 is improved.

SECTION 3

PEDESTRIAN IMPACTS

Pedestrian safety and "comfort" in walking, running, exercising, trips within the study area, and school trips will be impacted by barricade removal. There is a significant amount of pedestrian traffic; observations of students walking, residents walking and exercising, and neighborhood trips are common. While the pedestrian volumes are not high as in a central business district, pedestrian traffic is regular. The Pedestrian Evaluation is to assess the impact to any pedestrian traffic.

Traffic volume, speed, amount of shoulder walking width, roadway traveled width, and both the amount and type (handicapped, elderly, school) of pedestrian traffic have been quantified with a formulated index rating. Appendix D provides Pedestrian Rating Formula information. The rating has been used in other cities to establish and fund pedestrian improvement programs, selecting/prioritize improvements, as well as identifying development pedestrian impacts and mitigations. Pedestrian impacts of removing the barricade have been evaluated using the Pedestrian Rating Formula.

The streets north of the NE 39th Street and 203rd Avenue NE intersection have sidewalks on both sides. The street segments north of the barricade connecting to 192nd Drive NE (and SR 202) have sidewalks on each side of the street.

The pedestrian rating process is to assess the lack of pedestrian facilities, higher ratings result from higher vehicle traffic, narrower walkways, higher speeds, higher pedestrian use, and narrower vehicle traveled ways. The rating process has been used primarily for prioritizing and selecting where to make walkway improvements and for evaluating pedestrian impacts of development. Streets that have sidewalks on both sides have a pedestrian rating of zero (0).

Rating sheets for each segment in Appendix B include segment photos, vicinity maps, and segment impact ratings. The segments illustrate the barricade removal route of five affected segments. Link ratings are the average for both shoulder ratings. All of the segments have a sidewalk on one side. The ratings provide a link average of each side, the shoulder rating plus 0 for the sidewalk rating and divided by two.

Average link ratings are used in selecting street capital improvements and where high traffic volumes and conditions affect crossing the street to a sidewalk. Shoulder ratings are used where providing a walking area is being evaluated, this is often more "rural" areas with no shoulder improvements and there are numerous facilities without walkways.

The formula rating is generally used to evaluate lower pedestrian use routes. It was created to determine which locations would be selected first for pedestrian walkway

improvements. As such, these areas have lower pedestrian volumes that fluctuate substantially compared to vehicle volumes. The pedestrian use factor recognizes the lower volumes and fluctuations. The pedestrian use consideration is that there are any pedestrians.

Traffic volumes used for the pedestrian impact are:

- Wm Popp forecast for 2003 with the barricade,
- Wm Popp forecast for 2003 without the barricade,
- Wm Popp forecast for 2003 without the barricade and SR 202 widened,
- October 2001 traffic count, and
- April 2003 traffic count
- Factoring the April count using the Wm Popp without barricade volume divided by the with barricade volume.

The speed limit in the area for all of the routes is 25 MPH. The pedestrian traffic includes school children as well as elderly throughout the area.

FINDINGS

Facilities with ratings lower than 70 have not been selected for improvement where streets have been rated. The individual shoulder rating findings:

TABLE 3

Pedestrian Segments with Impacted Ratings

NE 37 Way (205 Place NE – NE 39 St) East Shoulder	Ped Type	Ped Volume	Vehicle Volume	Shoulder Width	Speed Limit	Road Width	INDEX
Wm Popp 2003 W barricade	1.75	1.10	1,170	5	25	24	**29**
April 7, 2003 count	1.75	1.10	1,360	5	25	24	**31**
2003 count factored for W/O Barricade	1.75	1.10	1,325	5	25	24.0	**31**

TABLE 3 – (continued)

Pedestrian Segments with Impacted Ratings

208 Avenue NE (NE 37 Way – 204 Ave NE) West Shoulder	Ped Type	Ped Volume	Vehicle Volume	Shoulder Width	Speed Limit	Road Width	INDEX
Wm Popp 2003 W barricade	1.75	1.10	1,580	5	25	22	**36**
April 7, 2003 count	1.75	1.10	1,493	5	25	22	**35**
2003 count factored for W/O Barricade	1.75	1.10	1,162	5	25	24.0	**29**
206 Place NE (NE 37 Way – 204 Ave NE) West Shoulder	Ped Type	Ped Volume	Vehicle Volume	Shoulder Width	Speed Limit	Road Width	INDEX
Wm Popp 2003 W barricade	1.75	1.10	800	3	25	22	**40**
April 7, 2003 count	1.75	1.10	768	3	25	22	**39**
2003 count factored for W/O Barricade	1.75	1.10	662	3	25	24.0	**34**
203 Avenue NE (NE 37 Way - NE 39 St) West Shoulder	Ped Type	Ped Volume	Vehicle Volume	Shoulder Width	Speed Limit	Road Width	INDEX
Wm Popp 2003 W barricade	1.75	1.10	Not Made	3	25	22	
April 7, 2003 count	1.75	1.10	233	3	25	22	**26**
2003 count factored for W/O Barricade	1.75	1.10	492	3	25	22	**34**
NE 39 St (204 Ave NE – 203 Ave NE) South Shoulder	Ped Type	Ped Volume	Vehicle Volume	Shoulder Width	Speed Limit	Road Width	INDEX
Wm Popp 2003 W barricade	1.75	1.10	890	5	25	24	**27**
April 7, 2003 count	1.75	1.10	838	5	25	24	**26**
2003 count factored for W/O Barricade	1.75	1.10	1,770	5	25	24.0	**34**

PEDESTRIAN IMPACTS SUMMARY

NE 42nd Street Barricade

The Pedestrian Ratings have been found to be lower than the 70 rating. Experience in other cities shows that walkway improvements are made for the higher rated streets, generally above 70.

Traffic counts were made April 7, 2003. Comparing the 1998 projected counts for with

barricade and the counts:

TABLE 4

2003 Counts and Projections

	2003 Count	2003 Projection
NE 37th Way	1,360	1,170
208th Avenue NE	1,493	1,580
NE 206th Place	768	800
203rd Avenue NE	492	not made
NE 39th Street	838	890

The small differences indicate that a Pedestrian Impact Evaluation difference for with and without the barricade based on the 1998 modeling projections have small rating differences. New modeling with calibration or removing the barricade would provide traffic information to evaluate impacts.

The average ratings for NE 37th Way, 208th Avenue NE, NE 206th Pl, 203rd Avenue NE, and NE 39th Street provide an indication of projected barricade removal pedestrian impact. The rating is made on 1998 traffic modeling information. Information indicates that there would be more traffic than projected in the 1998 work. The average ratings using the April 2003 count and factoring it for barricade removal are:

TABLE 5

Pedestrian Ratings with and without NE 42nd Barricade

PEDESTRIAN RATING INDEX FOR SHOULDER RATINGS

	April 2003 Count	April 2003 Count Factored for w/o Barricade
NE 37th Way	31	31
208th Avenue NE	35	29
NE 206th Place	39	34
203rd Avenue NE	26	34
NE 39th Street	26	34
Average	**31.4**	**32.4**

The small increase of the averages indicates an overall pedestrian impact but the rating system is used as an indication, a means to put an objective number on pedestrian travel along street segments. The low shoulder rating compared to the ratings of 212th Avenue Southeast (100) provides a measuring benchmark for comparison.

The ratings have been prepared using 1998 modeling projections. The author of that

report agrees that the expanding the boundary of that work beyond its NE 16th Street southern boundary would likely result in higher volumes which would increase the pedestrian ratings.

NE 51st Street Barricade

Traffic volume projections were not made in the Chrysallis Estates William Popp Study. The NE 51st Street barricade has been in place for a much longer time than the NE 42nd Street barricade. Removing the NE 51st Street barricade would impact Redmond streets and staff discussions identified that Redmond impacts of barricade removal would require resolution prior to a removal. No further work was made in the 2001 evaluation.

An evaluation of pedestrian impacts was made using estimated volume increases:

TABLE 6

NE 190th Place for 500, 1,000, and 2,000 per day

190 Place NE & NE 55 St (NE 51 St - NE 55 St)	Ped Type	Ped Volume	Estimated Vehicle Volume	Shoulder Width	Speed Limit	Road Width	INDEX
North Shoulder	1.75	1.10	100	1	25	20	**28**
South Shoulder	1.75	1.10	100	1	25	20	**28**
Average	1.75	1.10	100	1	25	20	**28**
IF 500/day	1.75	1.10	500	1	25	20	**47**
IF 1,000/day	1.75	1.10	1,000	1	25	20	**60**
IF 2,000/day	1.75	1.10	2,000	1	25	20	**75**

A reserved projected increase to 500 vehicles/day would increase a 28 rating to 47, an increase to 1,000 vehicles/day using NE 51st Street –190th Place NE-NE 55th Street to 187th Avenue NE would increase the rating from 28 to 60 and 2,000 per day would increase the rating to 75.

SECTION 4

CONCLUSIONS AND CONSIDERATIONS

Removing the barricades would increase neighborhood traffic volumes while there would not be a measurable change in Level-of-Service (LOS) at the congested SR 202 intersections. Volumes on some segments will exceed 2,000 per day based on the projections and adjusting the AWDT volumes to ADT. The 1998 volume projections do not include trips generated south of NE 16th Street, which would increase the projections. Improvements to SR 202 that were Hearing Examiner approval conditions have not been made yet resulting in the SR 202 congestion not being relieved.

There is a small increase in the average pedestrian rating index from 31.4 to 32.4 using projected 2003 volumes if the barricade is removed and SR 202 improvements not made. The pedestrian rating process is used to select where walkway improvements would be made. In those applications, the segments being rated typically range from the 20s to over 100 and facilities with ratings less than 70 have not generally been improved simply due to financial capability. Never the less, neighborhood petitions have been received for walkway improvements in low rated areas (ratings of 20 or less); the rating process has served the city in responding to the request by illustrating the total city walkway needs and priorities.

Removing the barricades would not increase volumes such that pedestrian crossing gaps would be affected, typically it takes 24-hour volumes of 5,000 to affect crossing gaps. However, the circuitous nature of the roadways will affect being able to see or hear on-coming traffic and affecting pedestrians crossing the street as well as driveway access.

Removing the barricades would not improve safety or reduce congestion on East Lake Sammamish Park Way, Sehalee Way, SR 202 or associated intersections. Removing the barricade would impact the "internal" 37th-39th-42nd route driveway traffic, uncontrolled intersection traffic and pedestrian traffic (walking and crossing). These would be perceptible impacts to the residents. The Hearing Examiner 2,000 ADT requiring additional traffic measures is projected to be exceeded and review of the previous work combined with evaluation of current traffic operations is that volumes would exceed the projections.

Removing the barricades for a trial period would identify volumes, speeds, impacts, and locations where traffic calming would provide the greatest effects. A trial opening should include a thorough on-going traffic evaluation that is developed with area residents. Such a trial opening would also need coordination with emergency services, utilities, post office, schools, and delivery services for the time of the trial and assessment method. Removal of the NE 51st Street barricade will need coordination and concurrence with the City of Redmond.

The traffic evaluation should include a review process involving stakeholders on whether or not to replace or continue without the barricade(s). The trial opening traffic evaluation should include the evaluation of signal warrants and turn lane needs where volumes may meet MUTCD warrants such as at East Lake Sammamish Park Way & 187th Avenue NE intersection.

Barricade removal may result in arterial level volumes, speeds, and assumption of main street right-of-way by the higher volume route motorists. A Traffic Engineering assessment of traffic control for these routes should be made prior to barricade removal; it should include traffic signing (regulatory and warning), striping, markings, lighting as well as traffic calming. The warning sign plan for vertical curves, horizontal curves, and grades should include an inclimate weather plan, closing of the steep grades for snow and ice as an example. Striping would include center lines, edge lines, and channelization. Markings would include stop lines, cross walks, and legends. Traffic control devices should be installed prior to barricade removal. The assessment of traffic control needs should include costs in order to budget installation and maintenance.

Arterials are planned for every five blocks, for example: Roosevelt Way (10th Avenue NE), 15th Avenue NE, 20th Avenue NE, 25th Avenue NE and so on. Planning for the area between East Lake Sammamish Park Way and the SR 202-Sahalee Way would include a collector arterial. A collector arterial functions just as the title implies – it collects traffic from adjacent access streets and connects to a higher arterial (minor or principal). The long term, 20 – 100 year, planning for this area will eventually resolve this with a collector arterial providing that service. Collectors are generally known and used by the immediate local area residents but do not serve as a minor arterial connecting traffic between arterials or to significant traffic generators such as retail or industrial. Removal of the barricade prior to the SR 202 improvements will result in through traffic, traffic operations for a minor arterial are higher speeds, fewer stops, higher volumes.

APPENDIX A

Tuesday, October 30, 2001 Traffic Volumes

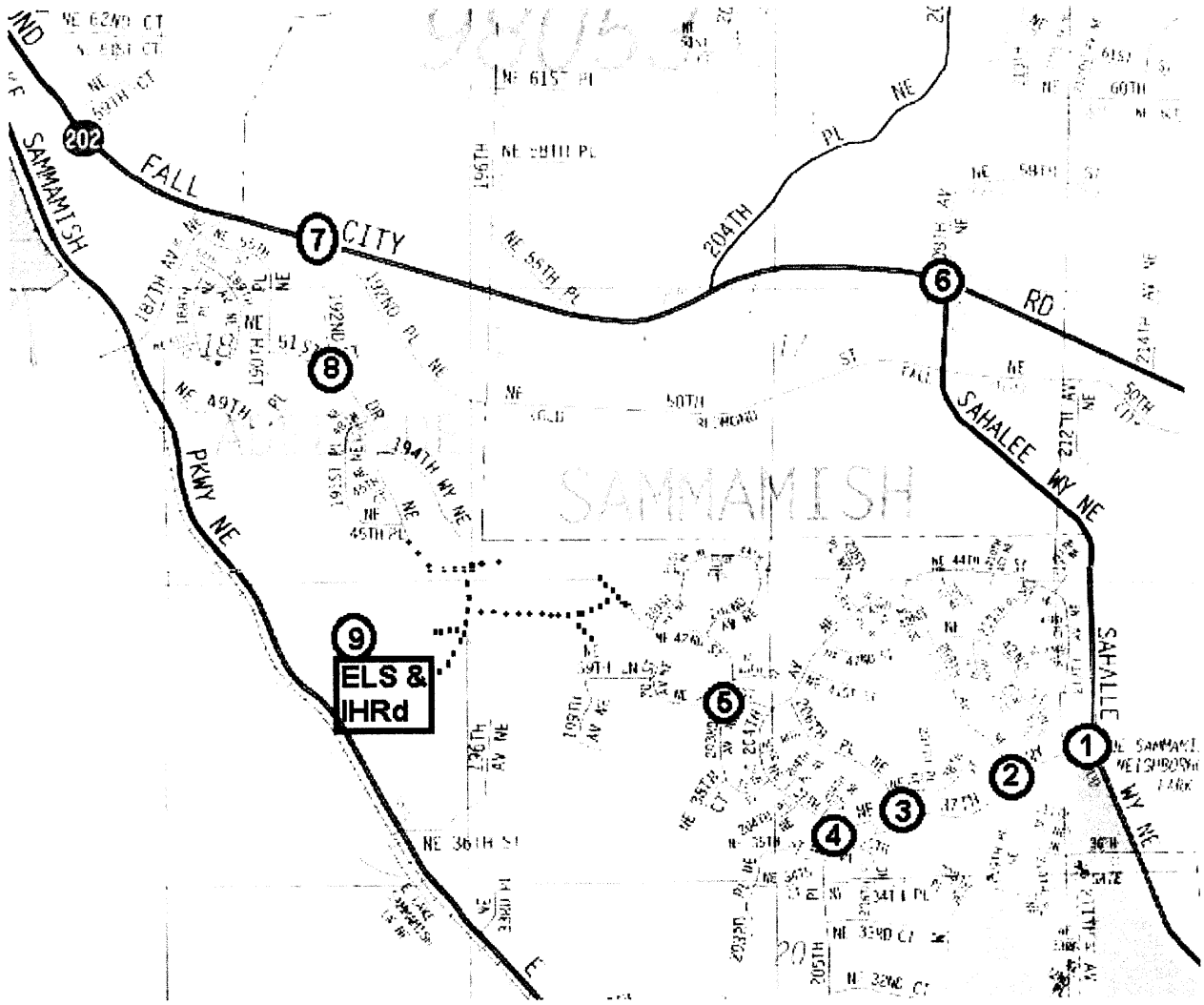
Location	AM Peak	PM Peak	24 Hour
1 Sahalee Wy NE & NE 37 Wy			
n/o NE 37 Way northbound	755	497	7,664
n/o NE 37 Way southbound	365	711	6,952
n/o NE 37 Way total	1,120	1,208	14,616
s/o NE 37 Way northbound	579	351	6,611
s/o NE 37 Way southbound	277	603	6,089
s/o NE 37 Way total	856	954	12,700
w/o Sahalee Way eastbound	245	134	2,415
w/o Sahalee Way westbound	133	282	2,417
w/o Sahalee Way total	378	416	4,832
Total intersection approach	1,189	1,196	15,978
2 208 Pl NE & NE 37 Wy			
n/o NE 37 Wy northbound	14	86	677
n/o NE 37 Wy southbound	79	44	708
n/o NE 37 Wy total	93	130	1,385
w/o 208 Pl eastbound	176	97	1,790
w/o 208 Pl westbound	128	194	1,827
w/o 208 Pl total	304	291	3,617
e/o 208 Pl eastbound	243	133	2,408
e/o 208 Pl westbound	121	278	2,408
e/o 208 Pl total	364	411	4,816
Total intersection approach	328	516	4,943
3 206 Pl NE & NE 37 Wy			
n/o NE 37 Wy northbound	13	53	397
n/o NE 37 Wy southbound	54	32	433
n/o NE 37 Wy total	67	85	830
w/o 206 Pl eastbound	146	93	1,639
w/o 206 Pl westbound	132	170	1,661
w/o 206 Pl total	278	263	3,300

	e/o 206 Pl	eastbound	167	93	1,698
	e/o 206 Pl	westbound	122	185	1,737
	e/o 206 Pl	total	289	278	3,435
	Total intersection approach		322	310	3,809
4	**205 Pl NE & NE 37 Wy**				
	n/o NE 37 Wy	northbound	13	33	289
	n/o NE 37 Wy	southbound	34	13	267
	n/o NE 37 Wy	total	47	46	556
	w/o 205 Pl	eastbound	122	86	1,352
	w/o 205 Pl	westbound	156	116	1,361
	w/o 205 Pl	total	278	202	2,713
	e/o 205 Pl	eastbound	142	92	1,611
	e/o 205 Pl	westbound	129	166	1,634
	e/o 205 Pl	total	271	258	3,245
	Total intersection approach		285	265	3,253
5	**203 Ave NE/NE 39 St**				
	n/o NE 39 St	northbound	9	43	384
	n/o NE 39 St	southbound	51	19	387
	n/o NE 39 St	total	60	62	771
	s/o NE 39 St	northbound	6	3	101
	s/o NE 39 St	southbound	12	2	104
	s/o NE 39 St	total	18	5	205
	w/o 203 Ave NE	eastbound	10	11	97
	w/o 203 Ave NE	westbound	2	15	97
	w/o 203 Ave NE	total	12	26	194
	e/o 203 Ave NE	eastbound	52	19	390
	e/o 203 Ave NE	westbound	11	46	394
	e/o 203 Ave NE	total	63	65	784
	Total intersection approach		78	79	979

6	**Sahalee Wy NE & SR 202**			
	s/o SR 202 northbound	771	393	7,814
	s/o SR 202 southbound	373	726	7,090
	s/o SR 202 total	1,144	1,119	14,904
	e/o Sahalee Wy eastbound	437	1,219	12,458
	e/o Sahalee Wy westbound	1,129	563	11,967
	e/o Sahalee Wy total	1,566	1,782	24,425
	w/o Sahalee Wy eastbound	708	1,246	13,189
	w/o Sahalee Wy westbound	1,265	681	13,262
	w/o Sahalee Wy total	1,973	1,927	26,451
	Total intersection approach	2,608	2,202	32,970
7	**192 Dr NE & SR 202**			
	s/o SR 202 northbound	130	55	1,081
	s/o SR 202 southbound	41	97	871
	s/o SR 202 total	171	152	1,952
	e/o 192 Dr NE eastbound	437	1,219	124,548
	e/o 192 Dr NE westbound	1,129	563	11,967
	e/o 192 Dr NE total	1,566	1,782	136,515
	w/o 192 Dr NE eastbound	401	1,428	13,891
	w/o 192 Dr NE westbound	1,359	634	13,769
	e/o 192 Dr NE total	1,760	2,062	27,660
	Total intersection approach	1,660	2,046	26,939
8	**192 Dr NE/NE 51 St**			
	w/o 192 Dr NE eastbound	10	2	55
	w/o 192 Dr NE westbound	2	5	53
	w/o total	12	7	108
	s/o NE 51 St northbound	61	32	522
	s/o NE 51 St southbound	29	56	515
	s/o NE 51 St total	90	88	1,037
	n/o NE 51 St northbound	67	35	574
	n/o NE 51 St southbound	31	61	569
	n/o NE 51 St total	98	96	1,143
	Total intersection approach	104	100	1,199

9	**E Lk Samm/Inglewd Hill Rd**			
	n/o Inglewood Hill Rd NB	1,254	533	9,665
	n/o Inglewood Hill Rd SB	383	1,244	10,759
	n/o Inglewood Hill Rd Tot	1,637	1,777	20,424
	s/o Inglewood Hill Rd NB	385	575	7,240
	s/o Inglewood Hill Rd SB	468	742	8,597
	s/o Inglewood Hill Rd Tot	853	1,317	15,837
	e/o E Lk Samm Pkwy WB	1,320	310	7,969
	e/o E Lk Samm Pkwy EB	285	1,067	8,237
	e/o E Lk Samm Pkwy Tot	1,605	1,377	16,206
	Total intersection approach	2,088	2,129	25,968

Traffic Count Vicinity Map



APPENDIX B

PEDESTRIAN RATING INVENTORY